

REMARKS

Claims 1-15 have been examined. Claims 1-12 are all of the claims currently pending in this application after entry of the forgoing amendments. Claims 13-15 are hereby cancelled.

35 U.S.C. §102:

Claims 1-10 and 14 are rejected under 35 U.S.C. §102(b) as being anticipated by, or in the alternative, under 35 U.S.C. §103(a) as obvious over Nakahira (U.S. Patent No. 4,429,068). Applicants respectfully traverse this rejection in view of the following remarks.

The present invention provides a novel and unobvious golf ball. For example, and not by limitation, the golf ball's composition aids in mold release and enables in-mold shaping and injection molding by blending in an appropriate amount of a polysiloxane fine powder, such as a silicone rubber powder, silicone resin powder or composite powder. This is done by first blending in the silicone powder in a cured state, rather than cross-linking a millable-type silicone rubber with a golf ball-forming material, as in the prior art. In addition, the claimed invention provides improved flight performance and durability against consecutive strikes, and also offers a soft feel when hit.

The above effects are supported by the summary of examples described in the specification. (See attached Appendix B.) As seen from the results in the table, the claimed golf balls remain durable against consecutive strikes and provide a satisfactory rebound even at a low temperature. The golf ball of Nakahira does not provide these effects, nor are the claimed

features taught or suggested by Nakahira. Actually, Nakahira teaches away from the present invention.

In particular, Nakahira discloses a cured rubber material comprising (A) 100 parts by weight of a rubber component, (B) 100 to 2,000 parts by weight of a factice, and (C) 200 to 2,000 parts by weight of a softening agent. The cured rubber has a hardness of from a maximum of 30°, as measured with an A-type rubber hardness tester, to a minimum of 15°, as measured with an F-type rubber hardness tester. It also has an impact resilience of not less than 50% and a tensile strength of 0.1 to 100 kg/cm². Nakahira teaches using the disclosed rubber material as a core of the golf ball, thus, teaching away from the presently claimed features. In particular, Nakahira fails to teach or suggest the use of the claimed rubber material in an intermediate layer and/or a cover. It is the placement of the claimed material in these locations that contributes to the beneficial aspects of the invention.

In addition, the cured rubber of Nakahira has a hardness of from a maximum of 30°, as measured with an A-type rubber hardness tester. The hardness of the cured rubber in Nakahira of up to 30° based on an A-type rubber hardness tester converts to up to 6° based on Shore D hardness. One skilled in the art would appreciate such a rubber as being a very soft and useful for vibration-proofing, sound-proofing, shock-absorbing or as a cushioning member.

In contrast, according to the claimed golf ball, the intermediate layer or outer layer should preferably have a Shore D hardness of at least 15, in particular, the intermediate layer should preferably have a Shore D hardness of at least 20, and the outer layer (cover) should preferably

have a Shore D hardness of at least 40 (see the present specification at page 12, lines 4-10). Thus, not only does the description of Nakahira teach away from the claimed features, but also the material of Nakahira would not provide the same effects of the present invention due to its different physical properties. Thus, Applicants respectfully submit that one skilled in the art would not find the claimed invention obvious in light of Nakahira.

Accordingly, Applicants submit that Nakahira fails to anticipate or make obvious claim 1. Claims 2-10 are patentable over Nakahira, at least by virtue of them depending on independent claim 1. The rejection to claim 14 is deemed moot due to its cancellation.

35 U.S.C. §103:

Claims 11-13 and 15

Claims 11-13 and 15 are rejected under 35 U.S.C. §103(a) as being unpatentable over Nakahira in view of Official Notice. Applicants respectfully traverse this rejection in view of the following remarks.

Claims 11-13 are patentable over Nakahira, at least because of their dependency on independent claim 1. This is because the Examiner's official notice does not make up for the deficiencies of Nakahira in regard to claim 1. Also, Applicants submit that the Examiner's allegation is not capable of instant and unquestionable demonstration as being "well-known" in the art, as required by MPEP §2144.03. As noted in MPEP §2144.03, if Applicants traverse the Examiner's taking of Official Notice, the Examiner must provide documentary support for his position.

The rejection of claim 15 is deemed moot due to the cancellation thereof. Thus, it is respectfully requested that the rejection of claims 11-13 and 15 be withdrawn.

Claims 1-15

Claims 1-15 are rejected under 35 U.S.C. §103(a) as being unpatentable over Sullivan (U.S. Patent Nos. 6,204,331 and 6,162,134) in view of Ueshima et al. (U.S. Patent No. 5,502,095 [hereinafter "Ueshima"]) and Nakahira. Applicants respectfully traverse this rejection in view of the following remarks.

Applicants submit that there is a significant difference between the claimed silicone rubber/resin powder and polyorganosiloxane of Ueshima, in addition to the references failing to disclose the claimed arrangement of elements.

The function for blending a silicone rubber powder in Ueshima is simply to enhance the workability and dispersibility. Ueshima does not teach or suggest that the golf balls remain durable against consecutive strikes and provide a satisfactory flying distance and rebound even at a low temperature, as explained above. The Examiner acknowledges that the blended composition of Ueshima can be used as a material for sport and leisure goods such as a golf club grip and a baseball bat grip. These uses differ greatly from using such a material in a golf ball to obtain the desired effects. Overall, one would not have been taught that the powder in Ueshima would improve performance aspects of a golf ball.

Thus, one would not take a material that is disclosed as being used for a grip, and arbitrarily put it into a golf ball. The fact that elements can be combined is not sufficient to support the rejection, unless there is some motivation to combine the elements which, in this case, there is not.

Moreover, it is important to note that the silicone powder disclosed in Ueshima is never used alone or taught to be separated from the polyorganosiloxane. Instead, it is explicitly taught to be an integral part of a master batch in which the polyorganosiloxane is blended therein. (See column 6, lines 61-65.) There is no motivation to first separate the powder from the polyorganosiloxane in Ueshima and then combine the powder with the silicone resin of Sullivan. Also, it is not taught that the powder alone in Ueshima provides the alleged “improved flexibility, ease of molding, and high resilience,” but instead it is the disclosed thermoplastic elastomer composition as a whole. (See col. 11, lines 21-27.) Further, the silicone rubber powder in Ueshima is described as merely one example of a filler that can be used together with other compounds equivalently. Thus, one skilled in the art would not have selectively taken the resin powder of Ueshima and combined it with the golf ball of Sullivan. Moreover, because Ueshima teaches to use its disclosed material for a master batch, in a thermoplastic elastomer composition throughout the disclosed devices (e.g., grip, o-ring, strut boot), there is no motivation to selectively apply it to any other applied reference so as to be in the intermediate layer and/or cover.

Also, there is no motivation to provide the material of Nakahira with Sullivan due to Nakahira's teaching away, as described above.

In regard to dependent claim 2, Applicants respectfully submit that the Examiner has not sufficiently shown that Nakahira discloses the claimed composite powder comprising silicone rubber particles having a surface coated with silicone resin. This feature is not taught just because one of the references discloses a resin.

Accordingly, Applicants respectfully submit that claim 1 is patentable over Sullivan '331 and '134 in view of Ueshima and Nakahira, and the rejection thereof under 35 U.S.C. §103(a) should be withdrawn. Dependent claims 2-12 are patentable over the applied references at least by virtue of them depending on independent claim 1. The rejection to claims 13-15 is deemed moot due the cancellation of these claims.

In view of the preceding amendments and remarks, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue that the Examiner feels may be best resolved through a personal or telephonic interview, the Examiner is kindly requested to contact the undersigned attorney at the local telephone number listed below.

AMENDMENT UNDER 37 C.F.R. §1.111
U.S. Appln. No. 09/732,786

Art Unit 3711
Q62216

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

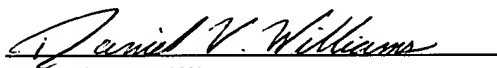
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APPENDIX A
VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Claims 13, 14 and 15 are cancelled without prejudice and/or disclaimer.

Claim 1 is amended as follows:

1. (Amended) A golf ball comprising a portion formed of a golf ball-forming composition having blended therein at least one of a silicone rubber powder, a silicone resin powder, and a composite powder thereof,

wherein said portion is one of an intermediate layer or a cover.

APPENDIX B

		Example			Comparative Example			Example
		1	3	4	3	4		5
Cover	Kind						Intermediate Layer	
Himilan 1706		50	50	50	50	50	H3046	100
Himilan 1605		50	50	50	50	50		
KMP597	silicone rubber powder	10						
X52-830	silicone resin powder		5			10	X52-830	5
KMP600	composite silicone powder			10				
XER91	crosslinked rubber (NBR) powder				10			
IM301	acrylic monomer composite powder					10		
Titanium dioxide		3	3	3	3	3		
Initial Velocity @23°C (m/s)		76.84	76.70	76.77	76.65	76.58		76.92
Initial Velocity @3°C (m/s)		75.96	75.77	75.88	75.52	75.48		76.02
Difference (m/s)		0.88	0.93	0.89	1.13	1.10		0.90
Flying Distance @23°C. (Total, m)		233.5	233.0	233.0	231.8	231.2		233.5
Flying Distance @3°C. (Total, m)		227.7	227.3	228.2	224.2	223.2		228.1
Difference (total, m)		5.8	5.7	4.8	7.6	8.0		5.4
Number of broken balls/test balls		0/5	0/5	0/5	2/5	2/5		0/5
Average of strikes at breakage (300 strikes at maximum)		not broken	not broken	not broken	290	290		not broken